05-GF-113
(1850)

Elroy Electric Municipal Utility

225 Main Street, Elroy, Wi. 53929

January 22, 2003

Mr. Scott Cullen, Chief Electric Engineer
Public Service Commission
610 N. Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: In the Matter of Filing Reporting Requirements for Appropriate Inspection and Maintenance, PSC Rule 113.0607(6)

Dear Mr. Cullen:

Enclosed for filing are 3 copies of ELROY ELECTRIC'S report to the commission, submitted every two years, showing compliance with its Preventative Maintenance Plan.

Kind Regards

RON SILVERTHORN

ELECTRIC SUPERINTENDENT

Enclosures

RECEIVED

Electric Division

TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN

ELROY ELECTRIC

FILING DEADLINE
FEBRUARY 1, 2003

January 22, 03

Ron Silverthorn

225 Main St.

Elroy, Wi. 53929

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This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

II Inspection Schedule and Methods:

SCHEDULE:	MONTHLY	ANNUAL	EVERY 5 YEARS
Substations	X	X	
Distribution (OH & UG)			X

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5 year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

III Condition Rating Criteria

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies .

0) Good condition
1) Good condition but aging
2) Non-critical maintenance required – normally repair within 12 months
3) Priority maintenance required – normally repair within 90 days

4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule.

V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

VII Inspected Circuits and Facilities

Circuit # and description	Substation
Brooklyn	**Elroy**
Brunner(Industrial)	
Business	
Georgetown	

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every *month* to confirm its operational readiness.

VIII Scheduling Goals Established and Success of Meeting the Criteria:

"It was this utility's goal to complete all monthly substation inspections and to inspect 40% of the distribution system. In addition, we expected to

complete all scheduled maintenance resulting from the inspections within the prescribed time periods specified in the rating criteria.

All of the inspection goals were met or exceeded. 100% of the underground system was inspected, 50% or 3 circuits rebuilt, eliminating several problems and code violations. 2 circuits were converted to 12kv and monthly substation inspections were completed.
The oil and DGA analysis, IR/RFI scans and checks on the annual inspection is scheduled to be performed by Alliant in April, 2003.

IX Facility condition – rating criteria:

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Elroy electric has completed an aggressive 5 year plan for major improvements to it's electric system.
Listed are the improvements completed in this plan:
1996/97-Installed decorative lighting along Main street and converted a 50 year old overhead distribution circuit along Main street to underground.
1997-converted Brunner and Brooklyn circuit substation getaways from overhead to underground to facilitate bridge construction on Franklin street.
1998/99-Rebuilt the 2.5 mile, 80 pole Brooklyn circuit.
1999/2000-Substation upgrade including new switchgear with 1200 amp breakers, new regulators, 12.4-4160kv stepdown transformer, converted the remaining overhead substation getaways to underground and converted the industrial and Brunner circuits from 4 to 12kv.
Retired 1940 vintage switchgear and 200 amp breakers.
2001-Completed rebuild (200 poles) of Georgetown and Business circuits
Elroy electric has completed a system wide rebuild. The 3 oldest circuits were completely rebuilt and the 10 year old industrial circuit was converted from 4 to 12kv.
The only outages we have experienced in two years occurred during the substation upgrade when a newly installed relay was found defective.
It caused several circuit outages until the problem was diagnosed.
Elroy's underground system was completely inspected in 2000 and repairs made..